



BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

www.miamidade.gov

NOTICE OF ACCEPTANCE (NOA)

Southern Metal Products, LLC d/b/a
All Broward Hurricane Panel, Inc.
450 West McNab Road
Ft. Lauderdale, Florida 33309

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: ASSA / Extruded Aluminum Bertha Bahama Shutter

APPROVAL DOCUMENT: Drawing No. 06-250, titled "ASSA / Extruded Bertha Bahama Shutter", sheets 1 through 9 of 9, prepared by Tilteco, Inc., dated October 24, 2006, last revision #1 dated October 26, 2006, signed and sealed by Walter A. Tillit Jr., P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and Expiration date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises & renews** NOA # 03-1027.06 and consists of this page 1, evidence submitted pages E-1, E-2, & E-3 as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



Helmy A. Makar
03/29/2007

NOA No 06-1026.03
Expiration Date: 03/04/2012
Approval Date: 03/29/2007
Page 1

Southern Metal Products, LLC d/b/a
All Broward Hurricane Panel, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #98-1223.11

A. DRAWINGS

1. *Drawing No. 98-200, titled "ASSA/Extruded Bertha Bahama Shutter", prepared by Tilteco Inc., dated August 13, 1998, sheets 1 through 8 of 8, signed and sealed by Walter A. Tillit, Jr., P.E.*

B. TESTS

1. *See Association's generic approval number 98-0090.*

C. CALCULATIONS

1. *See Association's generic approval number 98-0090.*

D. MATERIAL CERTIFICATIONS

1. *See Association's generic approval number 98-0090.*

E. STATEMENTS

1. *Release letter issued by the American Shutter Systems Association, Inc., dated December 16, 1998, certifying this product to meet the criteria of product tested and approved, and allowing All Broward Hurricane Panel, Inc. to use the test results approved under Miami-Dade County Approval No. 98-0090, signed by Mr. John J. Cooper.*
2. *Acknowledgment letter by All Broward Hurricane Panel, Inc., dated December 8, 1998, signed by Mr. LeRoy A. Peterson.*
3. *Letter by Tilteco Inc., dated December 17, 1998, certifying that the drawing (No. 98-200) prepared for All Broward Hurricane Panel, Inc., signed and sealed by Mr. Walter A. Tillit, Jr., P.E., is engineering wise identical to ASSA's generic drawing (No. 97-229).*
4. *Letter issued to Mr. Alfred W. Roettger on February 18, 1999 and returned signed by Mr. Alfred W. Roettger on February 22, 1999, indicating to please issue the proposed Notice of Acceptance as submitted and reviewed.*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #02-0215.10

A. DRAWINGS

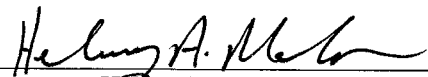
1. *None.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*



Helmy A. Makar, P. E., M.S.

Product Control Examiner

NOA No 06-1026.03

Expiration Date: 03/04/2012

Approval Date: 03/29/2007

Southern Metal Products, LLC d/b/a
All Broward Hurricane Panel, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

D. MATERIAL CERTIFICATIONS

1. *None.*

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #02-0502.06

A. DRAWINGS

1. *None.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. MATERIAL CERTIFICATIONS

1. *None.*

E. STATEMENTS

1. *Acceptance Letter issued to Mr. John Pisz on May 15, 2002 and returned signed by Mr. John Pisz on May 16, 2002, indicating to please issue the proposed Notice of Acceptance as submitted and reviewed.*

4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #03-1027.06

A. DRAWINGS

1. *Drawing No. 03-024, titled " ASSA / Extruded Bertha Bahama Shutter ", sheets 1 through 8 of 8, prepared by Tilteco, Inc., dated February 4, 2003, last revision #2 dated October 18, 2003, signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *See Association's generic approval number 03-0114.*

C. CALCULATIONS

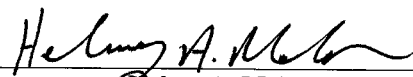
1. *See Association's generic approval number 03-0114.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *See Association's generic approval number 03-0114.*



Helmy A. Makar, P. E., M.S.
Product Control Examiner
NOA No 06-1026.03
Expiration Date: 03/04/2012
Approval Date: 03/29/2007

Southern Metal Products, LLC d/b/a
All Broward Hurricane Panel, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

F. STATEMENTS

1. *Letter by Tilteco Inc., dated October 15, 2003, signed and sealed by Mr. Walter A. Tillit, Jr., P.E., certifying that the drawing (No. 03-024) prepared for All Broward Hurricane Panel, Inc., is the same as drawing (No. 98-200) except revising General Notes #1 & #9 to reference the Florida Building Code and the ASCE 7-98.*

5. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 06-250, titled " ASSA / Extruded Bertha Bahama Shutter ", sheets 1 through 9 of 9, prepared by Tilteco, Inc., dated October 24, 2006, last revision #1 dated October 26, 2006, signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *See Association's generic approval number 05-0237.*

C. CALCULATIONS

1. *See Association's generic approval number 05-0237.*

D. QUALITY ASSURANCE

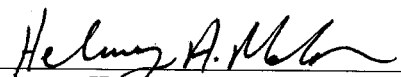
1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *See Association's generic approval number 05-0237.*

F. STATEMENTS

1. *Letter by Tilteco Inc., dated October 26, 2006, signed and sealed by Mr. Walter A. Tillit, Jr., P.E., certifying that the drawing (No. 06-250) prepared for Southern Metal Products, LLC d/b/a All Broward Hurricane Panel, Inc., is the same as drawing (No. 05-094).*



Henry A. Makar, P. E., M.S.
Product Control Examiner
NOA No 06-1026.03
Expiration Date: 03/04/2012
Approval Date: 03/29/2007

GENERAL NOTES:

1. EXTRUDED BERTHA BAHAMA SHUTTER SHOWN ON THIS PRODUCT APPROVAL DOCUMENT (P. A. D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2004 EDITION OF THE FLORIDA BUILDING CODE.
THIS BAHAMA SHUTTER SYSTEM MAY BE INSTALLED AT HIGH VELOCITY HURRICANE ZONES. DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1620 OF THE ABOVE MENTIONED CODE. IN ORDER TO VERIFY THAT ANCHORS ON THIS P.A.D., AS TESTED, WERE NOT OVERSTRESSED, A 33% INCREASE IN ALLOWABLE LOADS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. HOWEVER, FOR LAG SCREWS INTO WOOD, A 1.60 WIND LOAD DURATION FACTOR WAS USED TO CALCULATE SCREWS SPACINGS.
EXTRUDED BERTHA BAHAMA SHUTTER'S ADEQUACY FOR HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609.1.4 OF THE ABOVE MENTIONED CODE AS PER ATL REPORTS #0923.01-97 AND #0309.01-04 AS PER PROTOCOLS TAS-201, TAS-202 AND TAS-203.
2. ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION 6063-T6 ALLOY AND TEMPER, WITH $F_y = 25.0$ ksi MINIMUM (UNLESS OTHERWISE NOTED).
3. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 SERIES W/ 50 ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH OR CORROSION RESISTANT COATED CARBON STEEL AS PER DIN 50018.
4. BOLTS TO BE ALUMINUM ASSOCIATION 2024-T4 ALLOY AND TEMPER, ASTM A-307 GALVANIZED STEEL, OR AISI 304 SERIES STAINLESS STEEL WITH 36 ksi MINIMUM YIELD STRENGTH.
5. ALL ALUMINUM POP RIVETS TO BE 5052 ALUMINUM ALLOY WITH ALUMINUM MANDREL.
6. ANCHORS TO WALL SHALL BE AS FOLLOWS: (UNLESS OTHERWISE NOTED)
(A) TO EXISTING POURED CONCRETE: (Min. $f'_c=3145$ p.s.i.)
- 1/4" ϕ TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDEX.
- 1/4" ϕ x 7/8" CALK-IN ANCHORS AS MANUFACTURED BY THE POWERS FASTENERS, INC.

NOTES:

A.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO POURED CONCRETE IS 1 1/2".

A.2) CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED.
1/4" ϕ -20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST AND 1" MINIMUM FOR WALLS WITH NO STUCCO.

A.3) IN CASE THAT PRECAST STONE, PRECAST CONCRETE PANELS, OR PAVERS BE FOUND ON THE EXISTING WALL OR FLOOR, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES A.1) & A.2) ABOVE.

(B) TO EXISTING CONCRETE BLOCK WALL:

- 1/4" ϕ TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDEX.
- 1/4" ϕ x 7/8" CALK-IN ANCHORS AS MANUFACTURED BY THE POWERS FASTENERS, INC.

NOTES:

B.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO THE CONCRETE BLOCK UNIT SHALL BE 1 1/4".

B.2) CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE CONCRETE BLOCK UNIT. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" ϕ -20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST AND 1" MINIMUM FOR WALLS WITH NO STUCCO.

B.3) IN CASE THAT PRECAST STONE OR PRECAST CONCRETE PANELS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES B.1) & B.2) ABOVE.

(C) ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.

7. EACH SHUTTER SHALL HAVE A LEGIBLE AND READILY VISIBLE MARKING INSTRUCTING OWNER OR TENANT TO SECURE SHUTTER WITH SIDE & SILL BRACKETS DURING PERIODS OF HURRICANE WARNINGS.

8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE SHUTTER IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE. CONTRACTOR TO SEAL/CAULK ALL SHUTTER COMPONENT EDGES WHICH REMAIN IN PERMANENT AND CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION. CAULK AND SEAL SHUTTER TRACKS ALL AROUND FULL LENGTH. THIS SHUTTER SHALL ONLY BE ATTACHED TO CONCRETE, BLOCK OR WOOD FRAME BUILDINGS.

9. EXTRUDED BERTHA BAHAMA SHUTTER'S INSTALLATION SHALL COMPLY WITH SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.

10. (a) THIS P.A.D. PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.A.D.

(b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.A.D., PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.

(c) THIS P.A.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

(d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.A.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.A.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

(e) THIS P.A.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

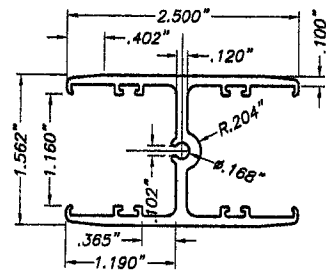
11. SHUTTER'S MANUFACTURER LABEL SHALL BE PLACED ON THE EXPOSED SURFACE OF THE BAHAMA FRAME \oplus OR \odot .
ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABEL SHALL READ AS FOLLOWS:
SOUTHERN METAL PRODUCTS, LLC d/b/a ALL BROWARD HURRICANE PANEL, INC.
FORT LAUDERDALE, FL.
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.

F.B.C.(High Velocity Hurricane Zone)

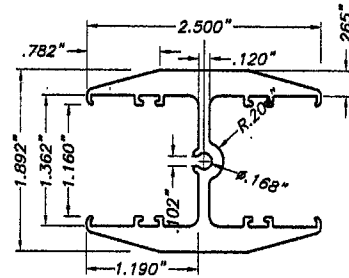
PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 06-1026.03
Expiration Date 03/04/2012
By *Heather A. Miller*
Miami Dade Product Control
Division

[Signature]
OCT 26 2006

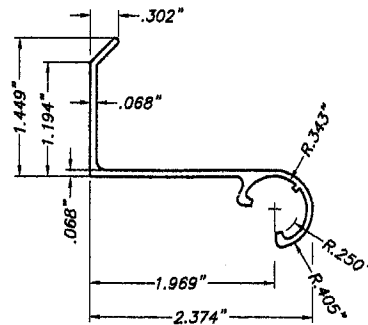
TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166 Phone : (305)871-1530 . Fax : (305)871-1531 EB-0006719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167 © 2004 TILTECO INC.		ASSA / EXTRUDED BERTHA BAHAMA SHUTTER		DRAWN BY: F.P.	
SOUTHERN METAL PRODUCTS, LLC d/b/a ALL BROWARD HURRICANE PANEL, INC. 450 WEST McNAB ROAD FORT LAUDERDALE, FL. 33309 PHONE (954) 247-3330 FAX (954) 247-3492		10/24/06 DATE		06-250 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-024	-	3	-	-
2	-	-	4	-	-
				SHEET 1 OF 9	



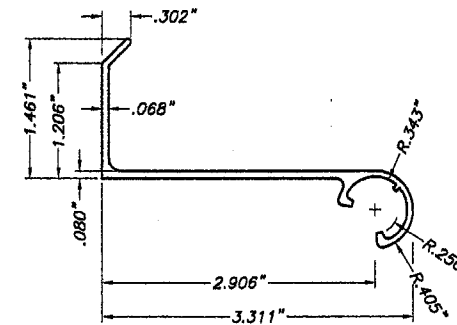
A1 REGULAR INTERIOR MULLION
6005-T5 Alum. ALLOY
SCALE: 1/2" = 1"



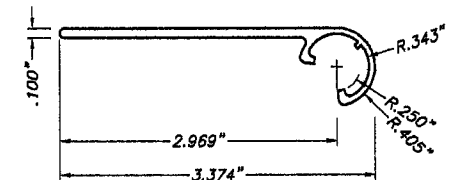
A2 HEAVY INTERIOR MULLION
6005-T5 Alum. ALLOY
SCALE: 1/2" = 1"



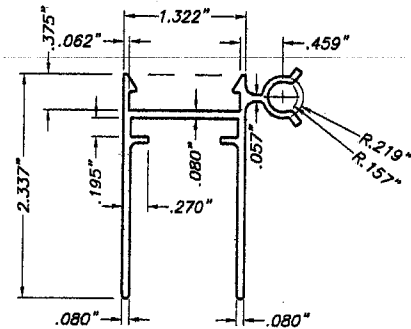
B FEMALE HINGE
SCALE: 1/2" = 1"



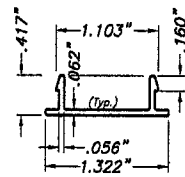
C 1" B. O. FEMALE HINGE
SCALE: 1/2" = 1"



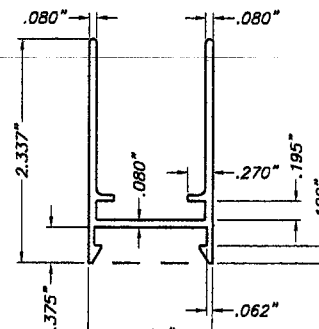
D FLAT FEMALE HINGE
SCALE: 1/2" = 1"



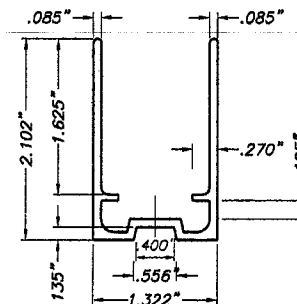
E BAHAMA MALE TOP FRAME
SCALE: 1/2" = 1"



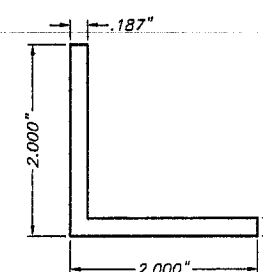
F SNAP CAP
SCALE: 1/2" = 1"



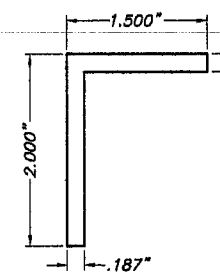
G BAHAMA FRAME
SCALE: 1/2" = 1"



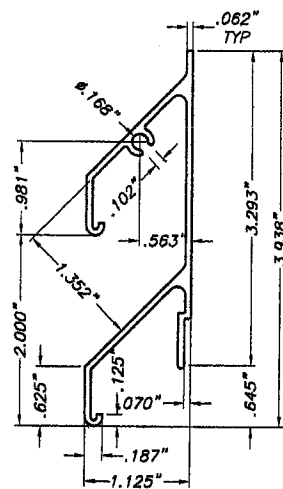
G1 ALTERNATE BAHAMA FRAME
SCALE: 1/2" = 1"



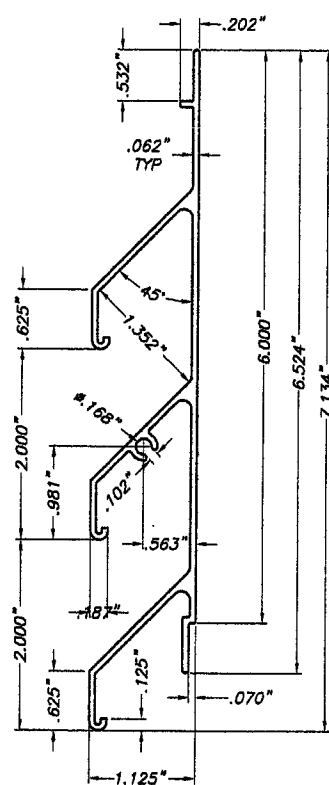
H CORNER KEY
1" LONG
SCALE: 1/2" = 1"



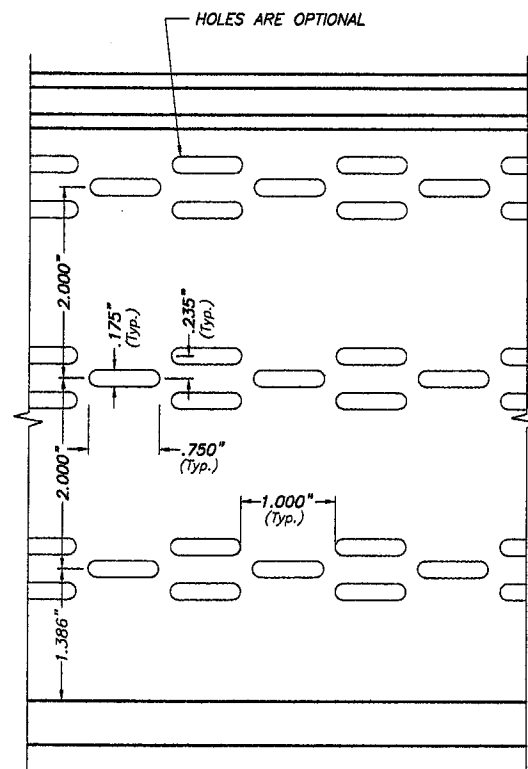
N WALL MOUNT Alum. BRACKET
7" LONG
SCALE: 1/2" = 1"



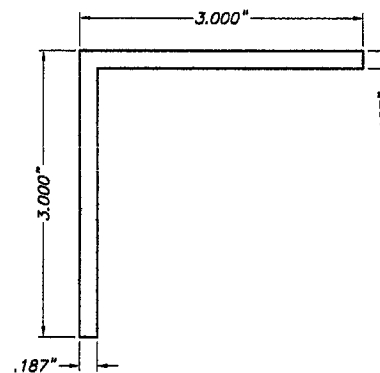
I HALF SHUTTER BLADE
SCALE: 1/2" = 1"



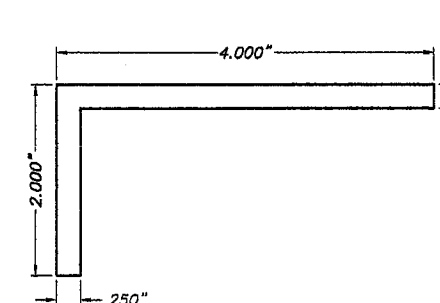
J SHUTTER BLADE
SCALE: 1/2" = 1"



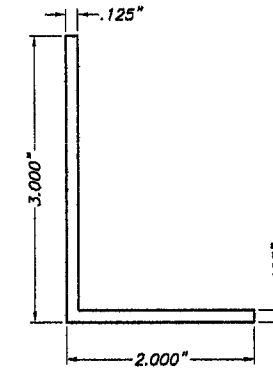
SHUTTER BLADE ELEVATION
SCALE: 1/2" = 1"



O BUILD-OUT Alum. BRACKET
7" LONG
SCALE: 1/2" = 1"



P BUILD-OUT SIDE BRACKET
7" LONG
SCALE: 1/2" = 1"



Q SILL ANGLE
SCALE: 1/2" = 1"

COMPONENTS

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 06-1026.03
Expiration Date 03/04/2012
By *Helmut A. Miller*
Miami Field Product Control
Division

F.B.C. (High Velocity Hurricane Zone)

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166
Phone : (305) 871-1530 • Fax : (305) 871-1531
EB-0006719
WALTER A. TILLIT Jr., P. E.
FLORIDA Lic. # 44167
© 2004 TILTECO INC.

ASSA / EXTRUDED BERTHA BAHAMA SHUTTER

SOUTHERN METAL PRODUCTS, LLC d/b/a ALL BROWARD HURRICANE PANEL, INC.

450 WEST McNAB ROAD
FORT LAUDERDALE, FL. 33309
PHONE (954) 247-3330 FAX (954) 247-3492

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-024	-	3	-	-
2	-	-	4	-	-

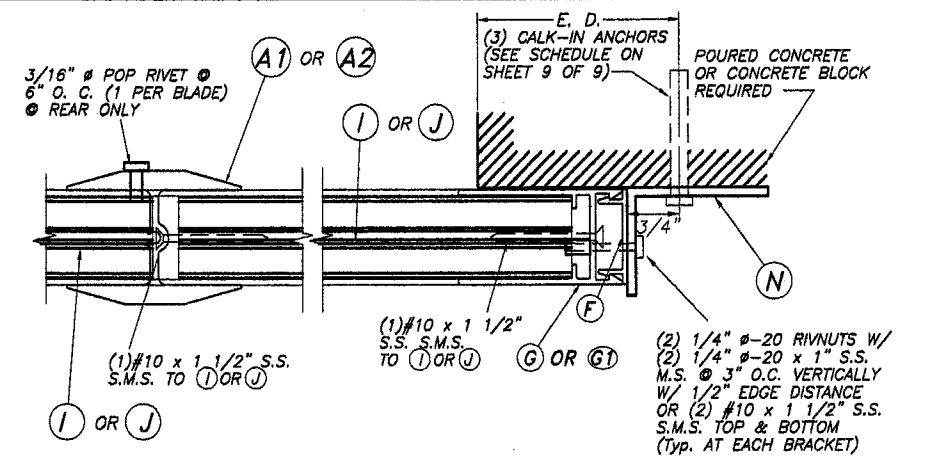
DRAWN BY:
F.P.

10/24/06
DATE

06-250
DRAWING No

SHEET 2 OF 9

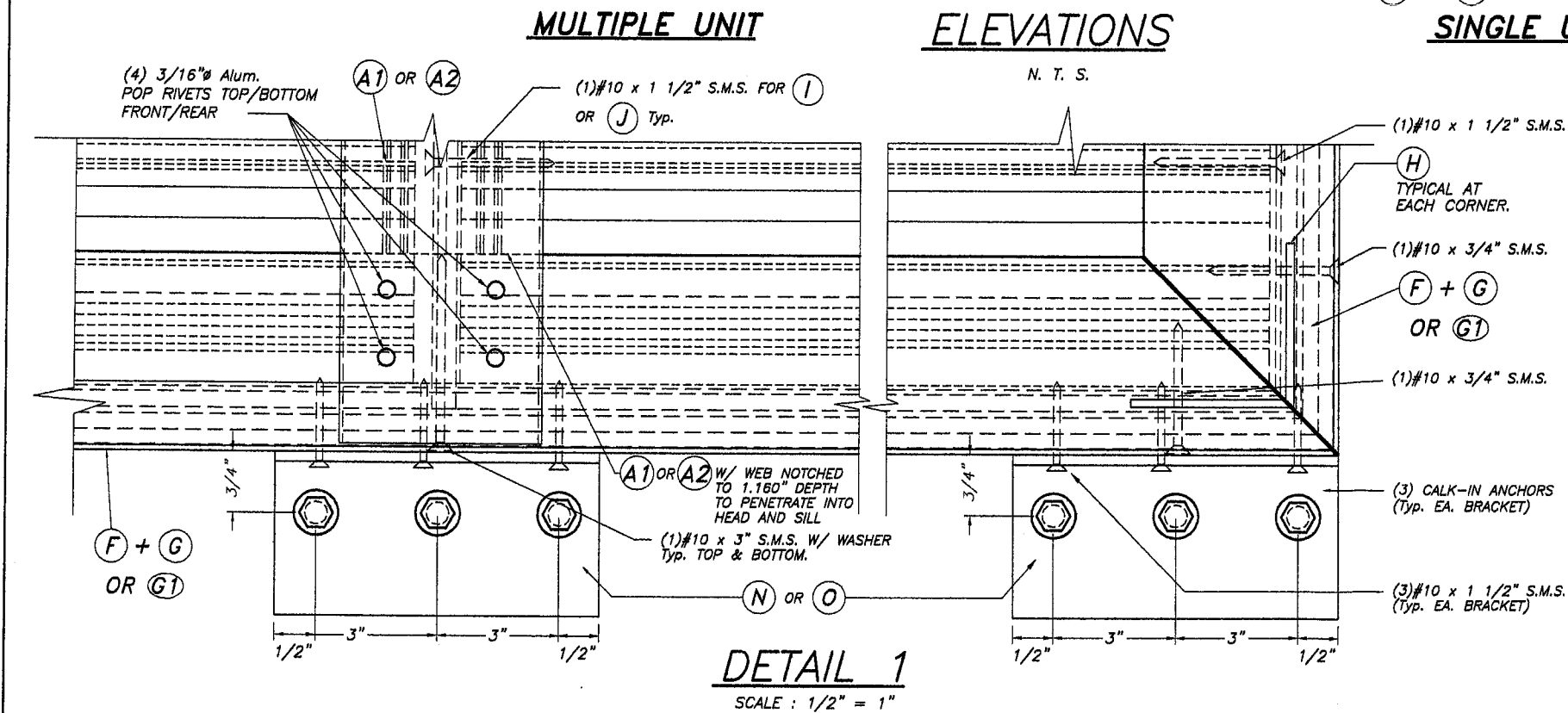
OCT 20 2006



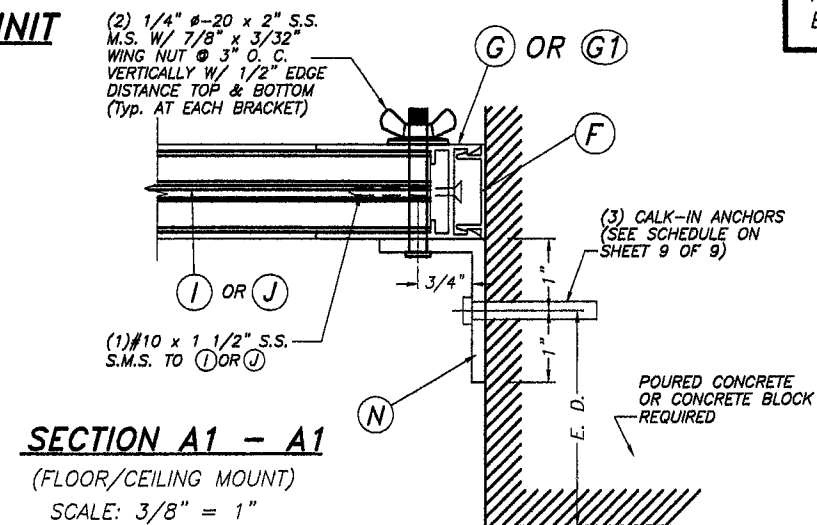
(BUILD-OUT) SCALE : $3/8" = 1"$

NOTE:
E. D. = 3 1/2" Min.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 06-1026.03
Expiration Date 03/04/2012
By Heidi A. Nelson
Miami Dade Product Control
Division



SINGLE UNIT



SECTION A1 - A1
(FLOOR/CEILING MOUNT)
SCALE: 3/8" = 1"

F.B.C. (**H**igh **V**elocity **H**urricane **Z**one)

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33168
Phone : (305)871-1530 . Fax : (305)871-1531
EB-0006719
WALTER A. TILLIT Jr., P. E.
FLORIDA Lic. # 44167
© 2004 TILTECO INC.

ASSA / EXTRUDED BERTHA BAHAMA SHUTTER

**SOUTHERN METAL PRODUCTS, LLC d/b/a
ALL BROWARD HURRICANE PANEL, INC.**

450 WEST McNAB ROAD
FORT LAUDERDALE, FL 33309
PHONE (954) 247-3330 FAX (954) 247-3492

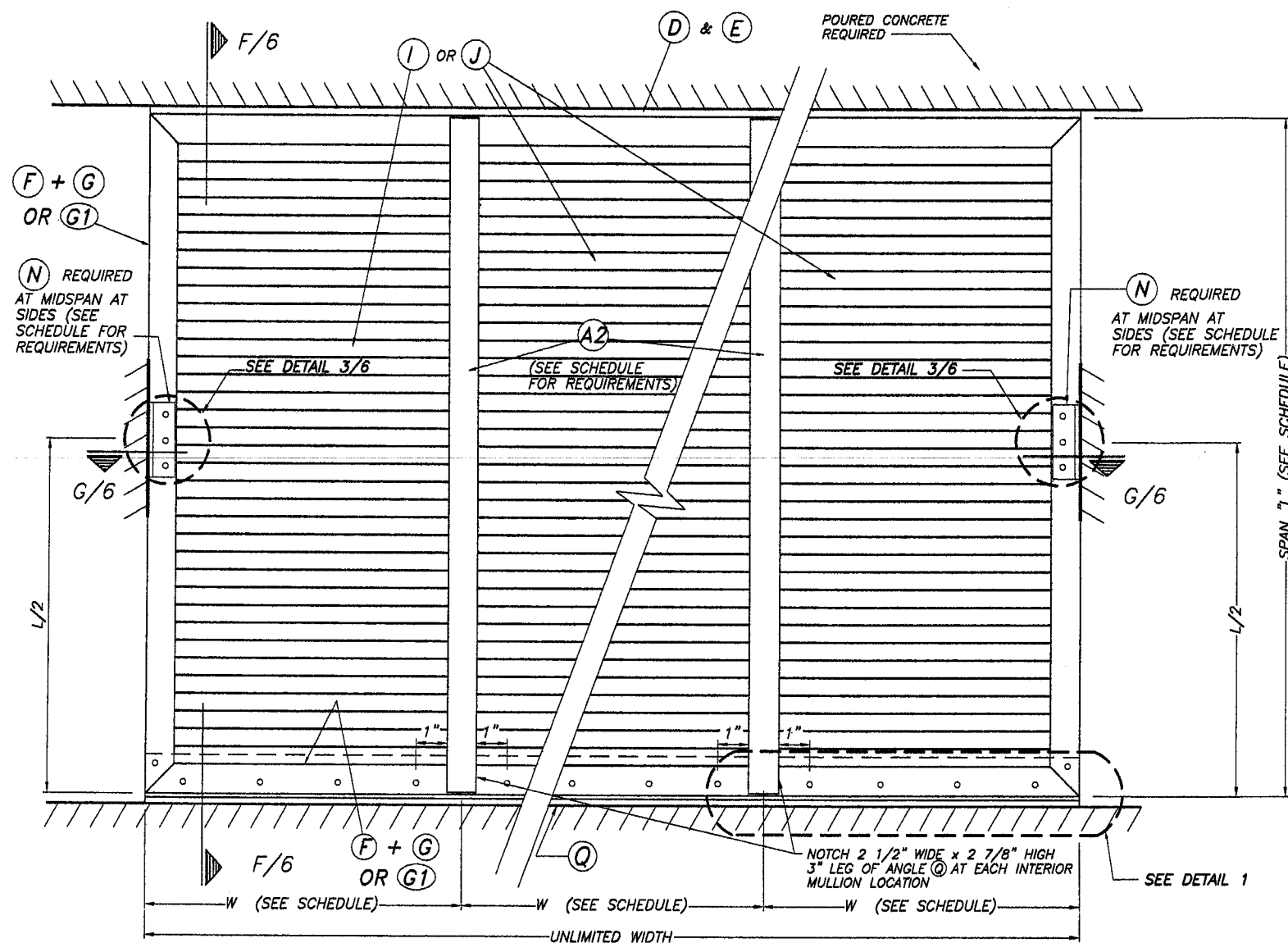
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-024	-	3	-	-
2	-	-	4	-	-

DRAWN BY:
F.P.

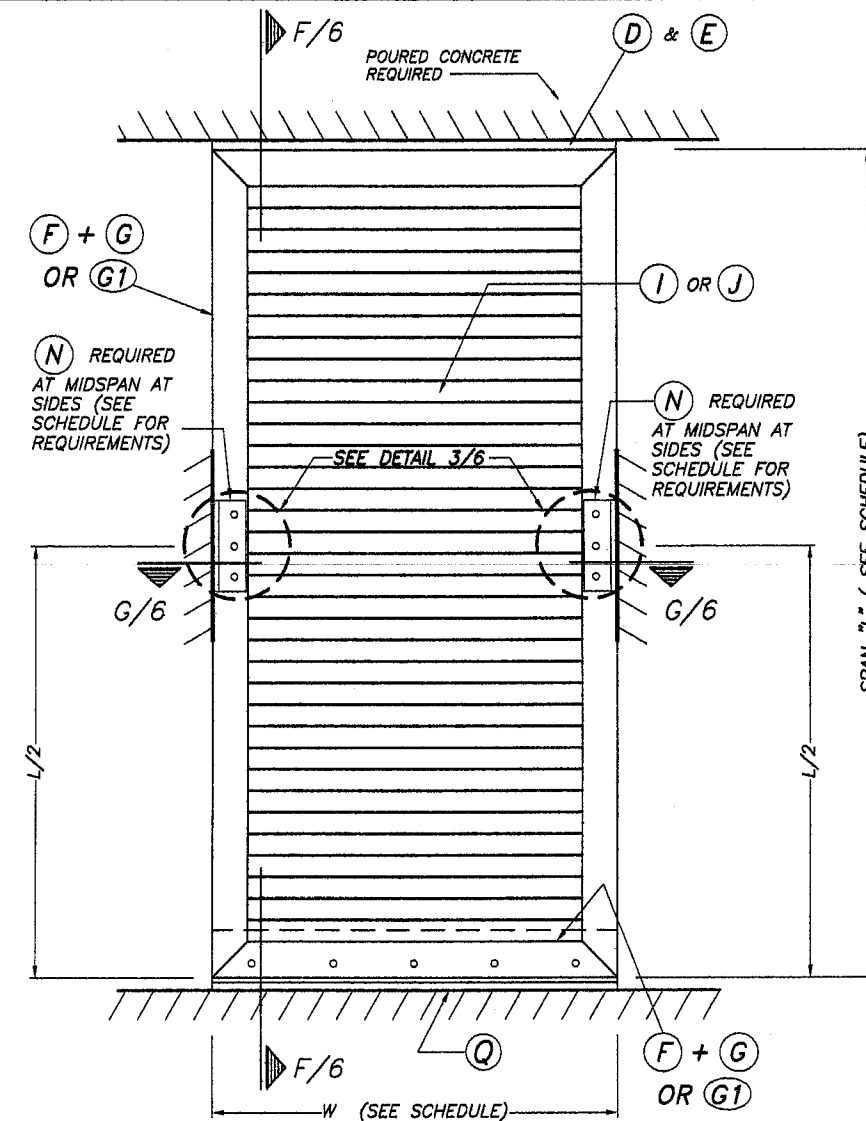
10/24/06
DATE

06-250
DRAWING No

SHEET 3 OF 9



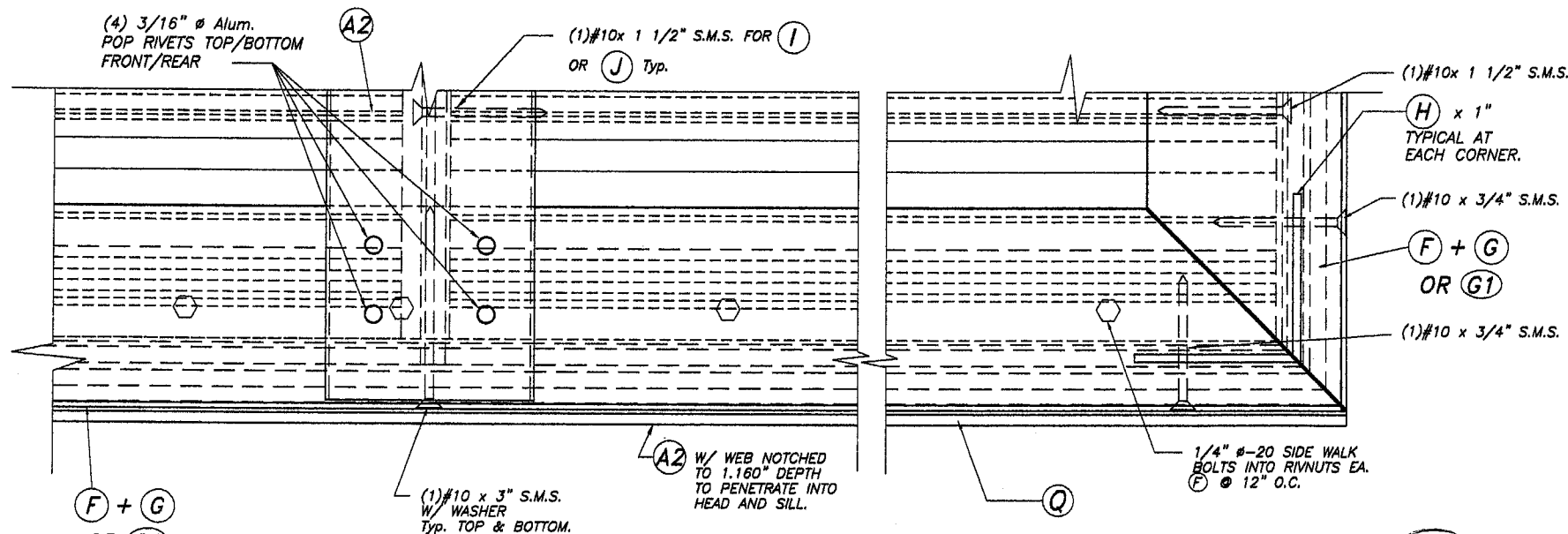
MULTIPLE UNIT



SINGLE UNIT

ELEVATIONS

N. T. S.



DETAIL 1

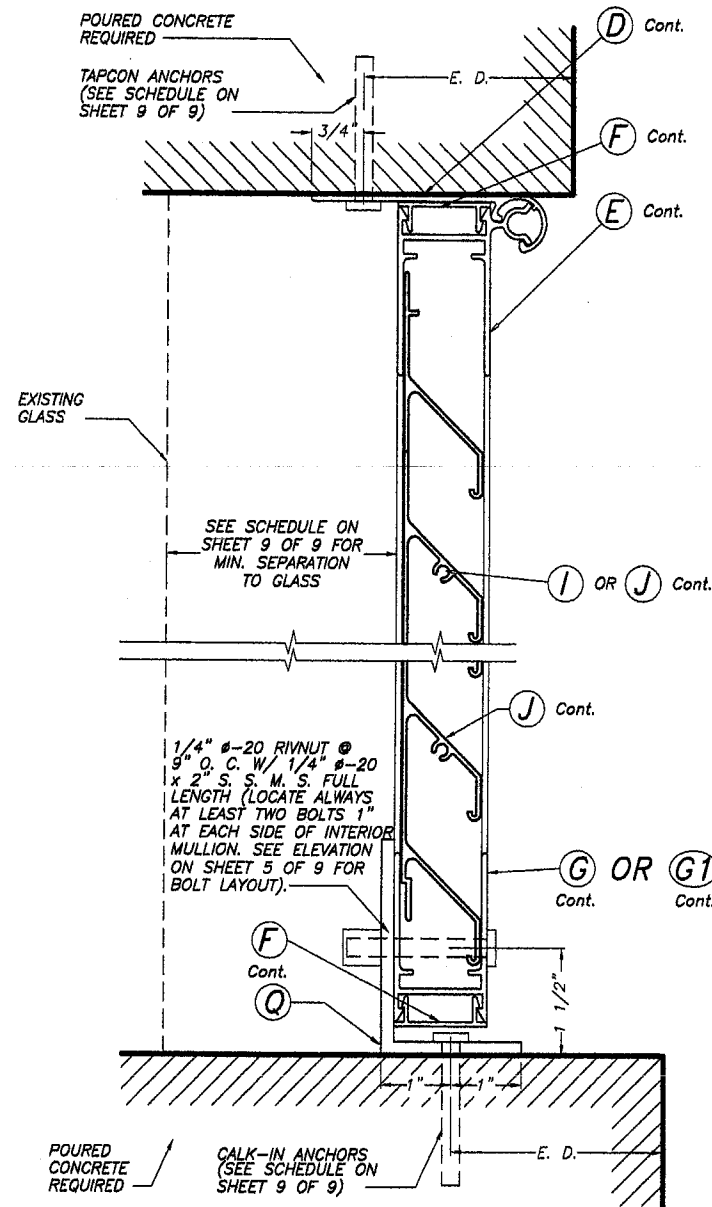
SCALE : 1/2" = 1"

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Miami Dade Product Control
Division

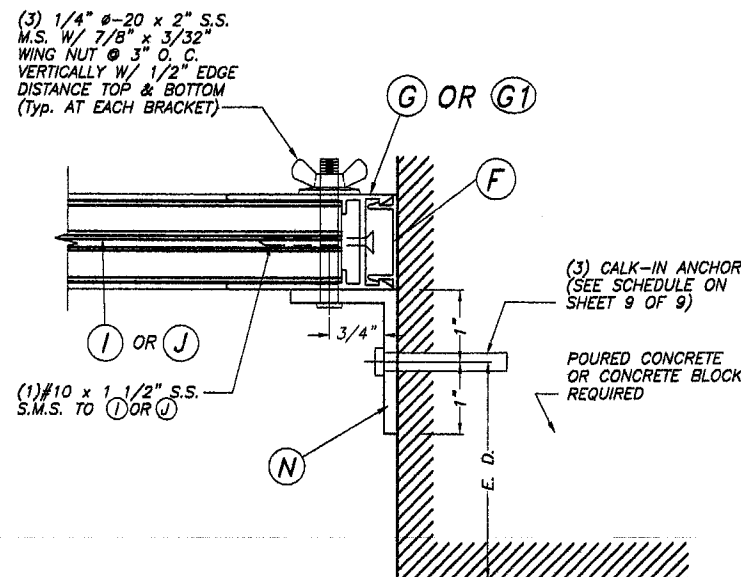
F.B.C. (High Velocity Hurricane Zone)

TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166 Phone : (305) 871-1530 Fax : (305) 871-1531 EB-0006719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167 © 2004 TILTECO INC.		ASSA / EXTRUDED BERTHA BAHAMA SHUTTER SOUTHERN METAL PRODUCTS, LLC d/b/a ALL BROWARD HURRICANE PANEL, INC. 450 WEST McNAB ROAD FORT LAUDERDALE, FL. 33309 PHONE (954) 247-3330 FAX (954) 247-3492		DRAWN BY: F.P. 10/24/06 DATE 06-250 DRAWING No SHEET 5 OF 9																
		<table border="1"> <thead> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD 03-024</td> <td>--</td> <td>3</td> <td>--</td> <td>--</td> </tr> <tr> <td>2</td> <td>--</td> <td>--</td> <td>4</td> <td>--</td> <td>--</td> </tr> </tbody> </table>		REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	1	OLD 03-024	--	3	--	--	2	--	--	4	--
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OCT 23 2006

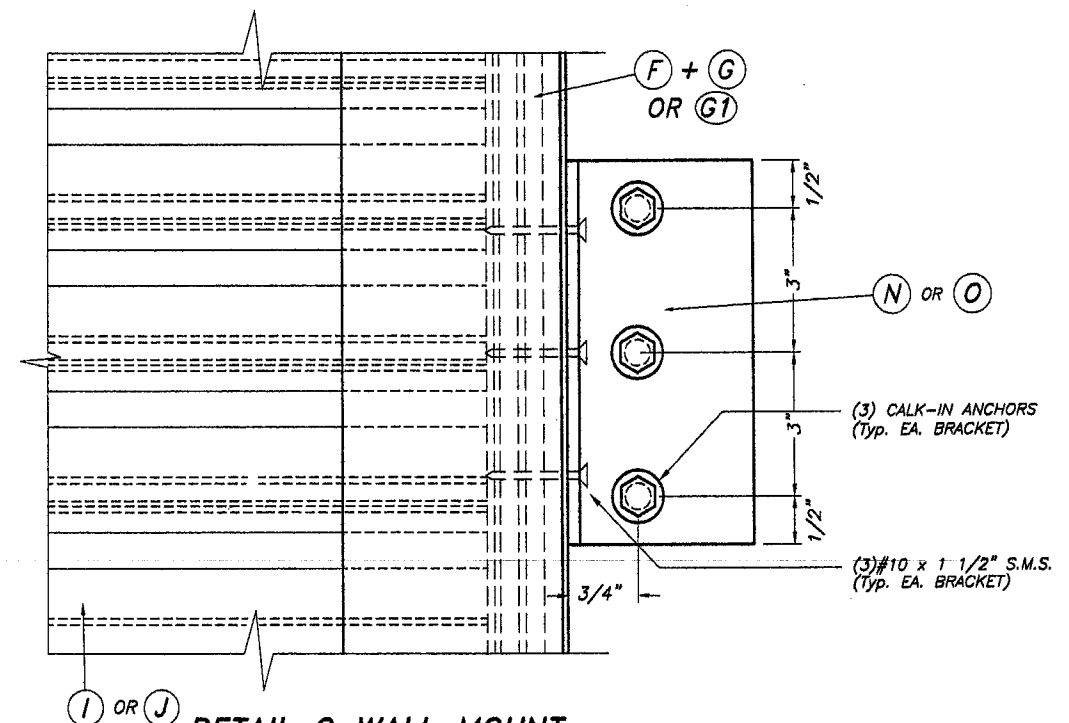


SECTION F - F (TRAPPED MOUNT)
HURRICANE POSITION
SCALE: 3/8" = 1"

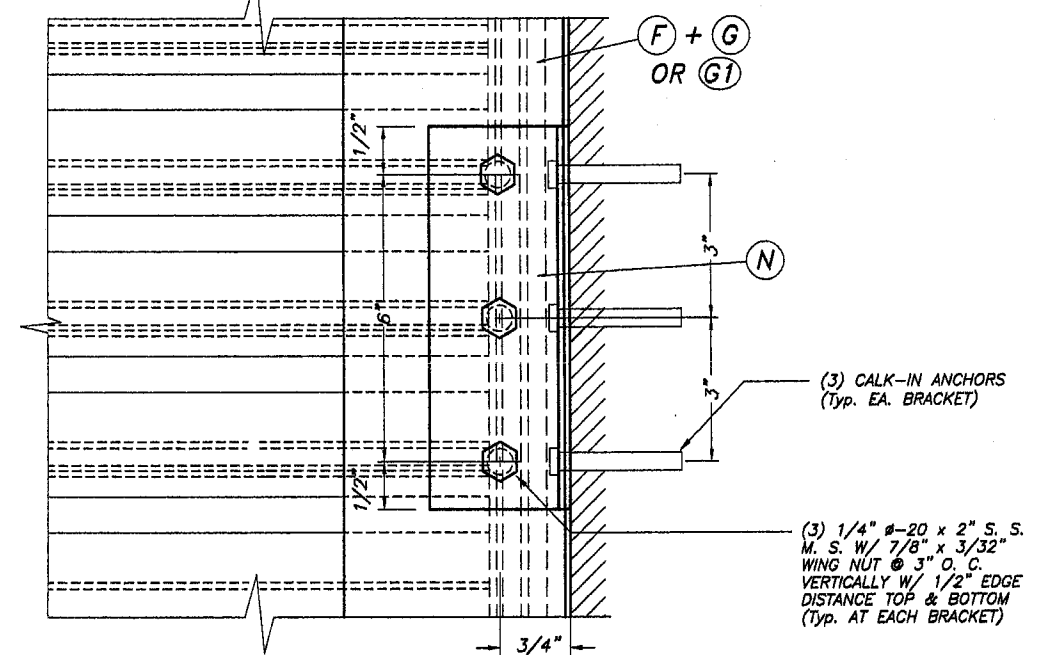


SECTION G - G
(TRAPPED MOUNT)
HURRICANE POSITION
SCALE: 3/8" = 1"

NOTE:
E. D. = 3 1/2" Min.




DETAIL 2 WALL MOUNT.
SCALE: 1/2" = 1"

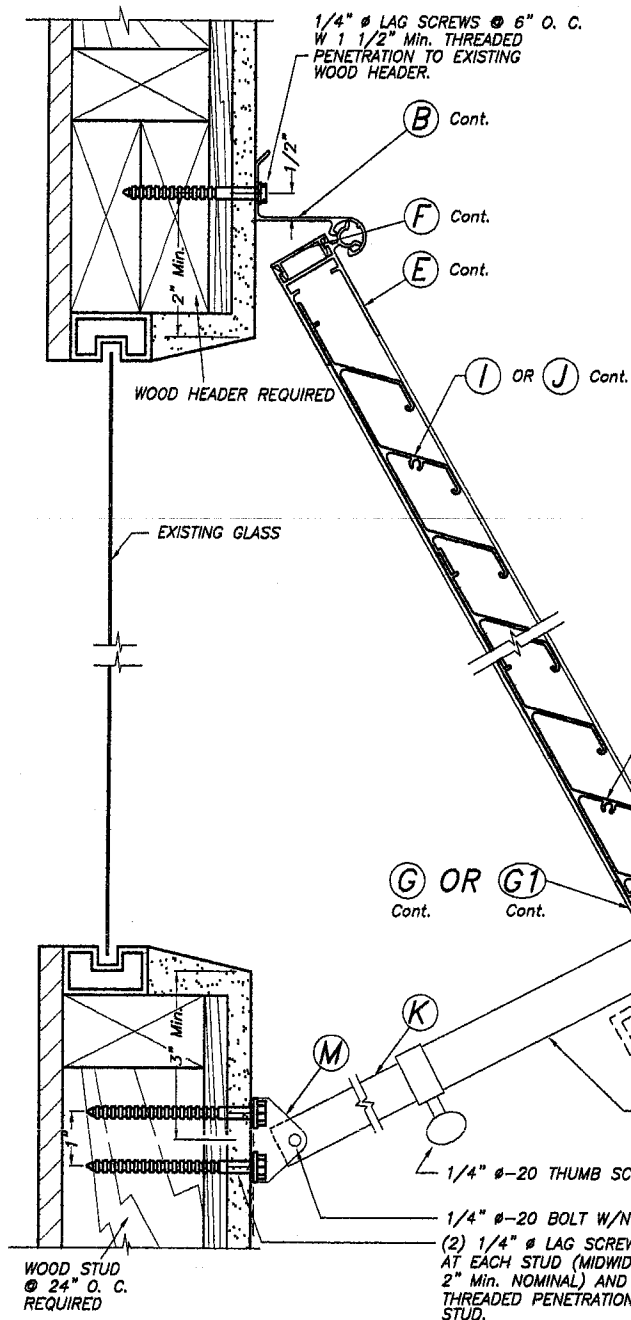


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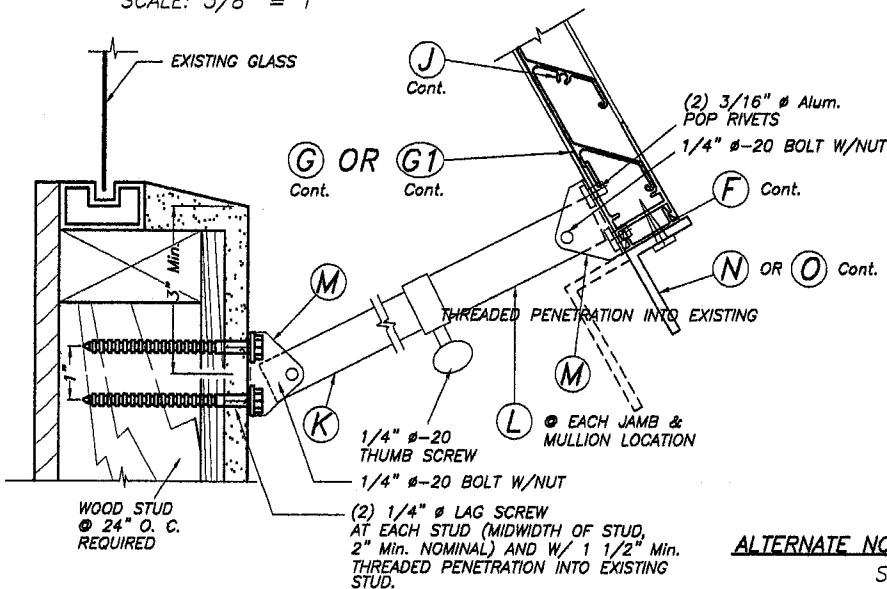
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Miami Data Product Control
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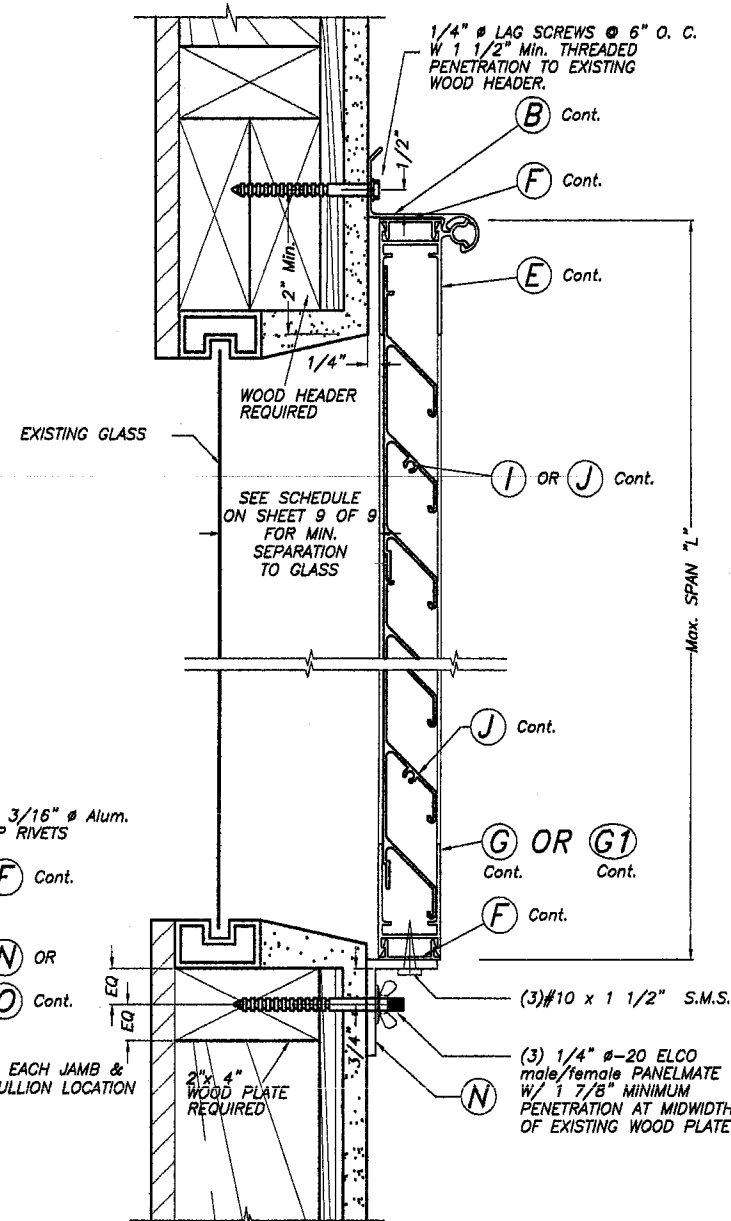
<div><p>TILTECO INC.</p><p>TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166 Phone : (305)871-1530 . Fax : (305)871-1531 EB-0006719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167</p><p>© 2004 TILTECO INC.</p></div>	ASSA / EXTRUDED BERTHA BAHAMA SHUTTER						DRAWN BY: F.P.																		
	SOUTHERN METAL PRODUCTS, LLC d/b/a ALL BROWARD HURRICANE PANEL, INC. 450 WEST McNAB ROAD FORT LAUDERDALE, FL. 33309 PHONE (954) 247-3330 FAX (954) 247-3492						10/24/06 DATE																		
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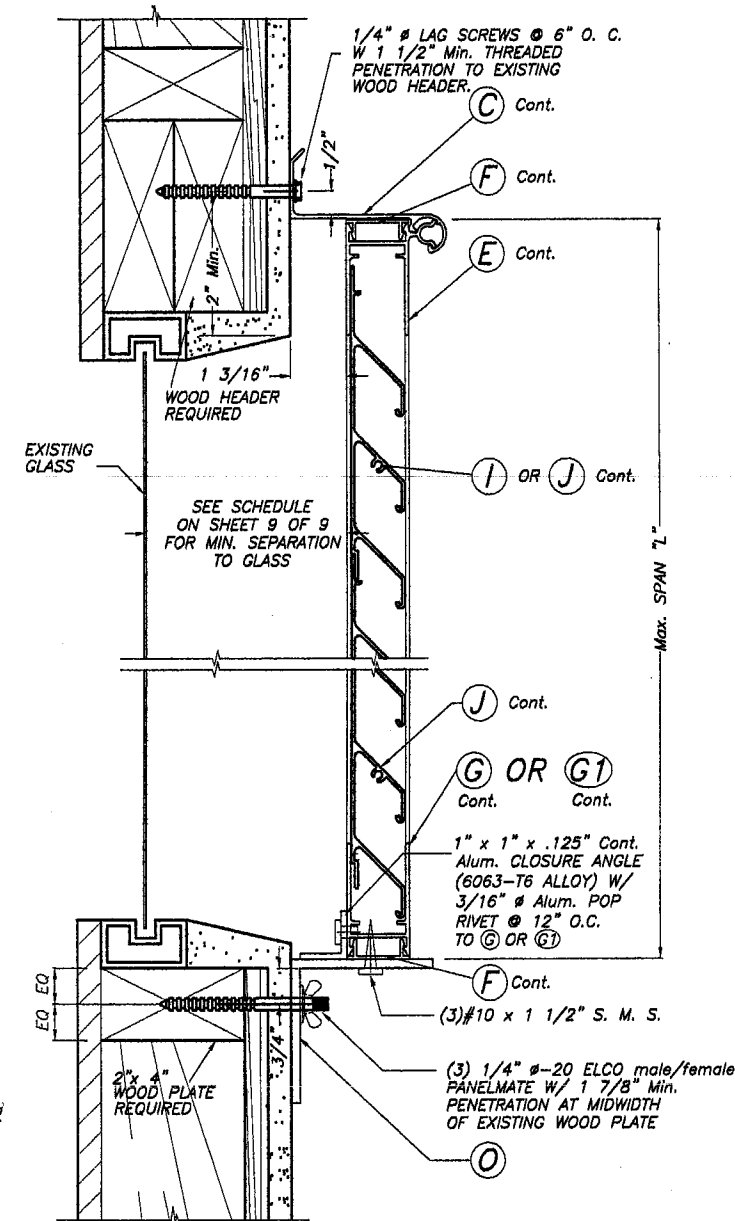
NON HURRICANE POSITION DETAIL: (74 m.p.h. OR LESS WIND SPEED)
SCALE: 3/8" = 1"



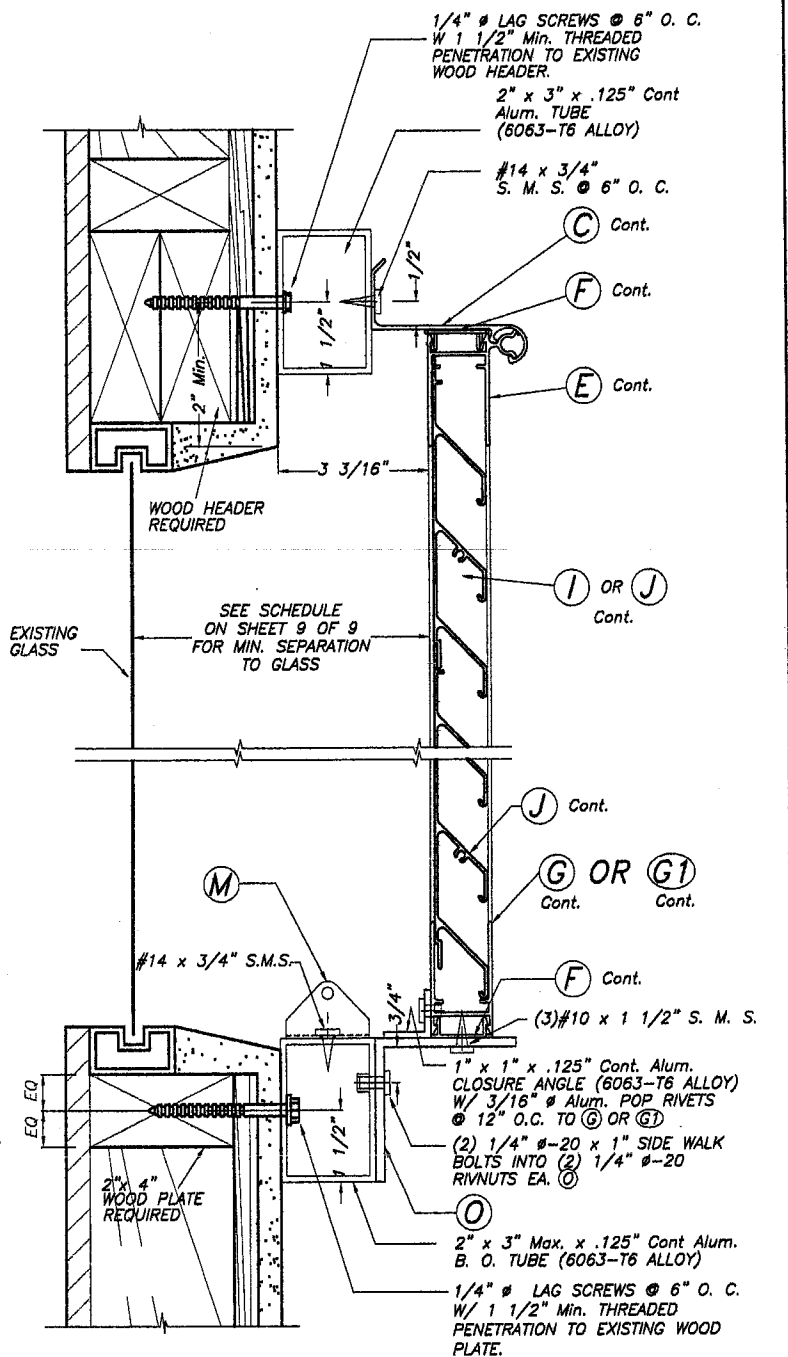
ALTERNATE NON HURRICANE POSITION DETAIL
SCALE: 3/8" = 1"



ALTERNATIVE 1
HURRICANE POSITION
SCALE: 3/8" = 1"



ALTERNATIVE 2
HURRICANE POSITION
SCALE: 3/8" = 1"



ALTERNATIVE 3
HURRICANE POSITION
SCALE: 3/8" = 1"

WALL MOUNTING INSTALLATION & BUILD-OUT
- SECTION A
INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS

NOTES :

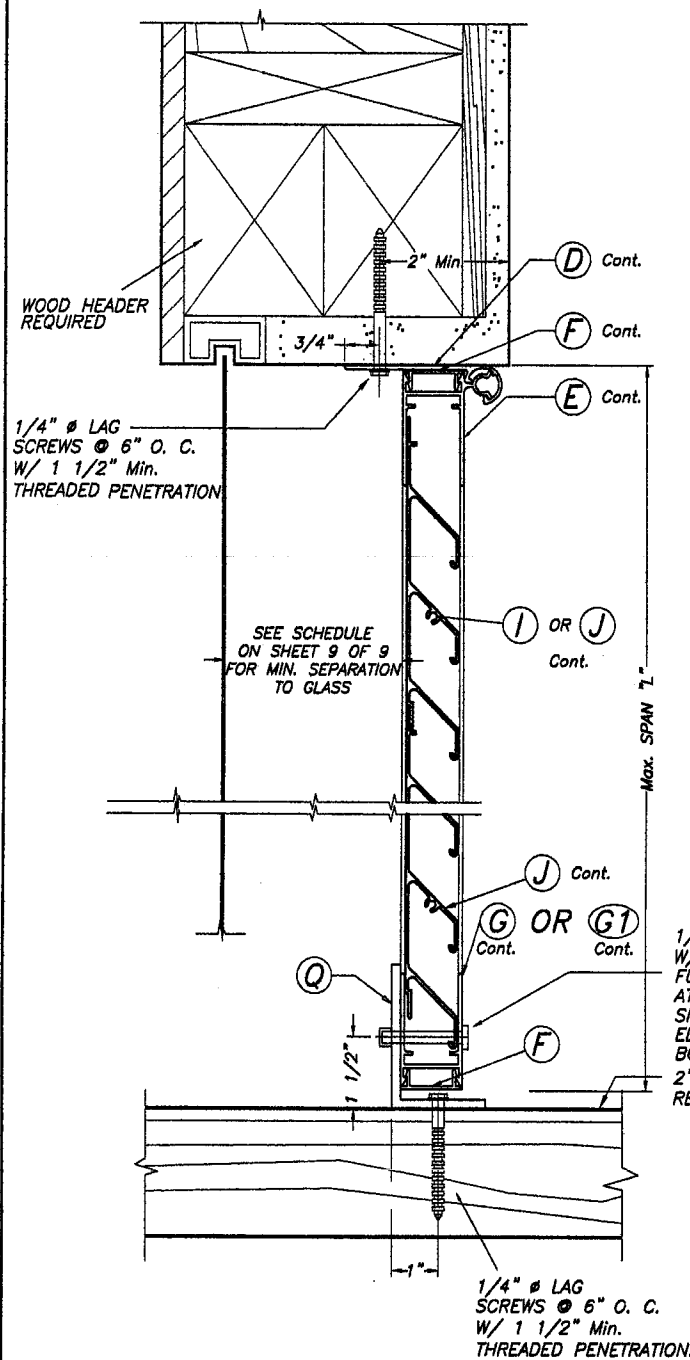
1. INSTALLATIONS ARE ONLY VALID FOR INSTALLATIONS WITH DESIGN WIND LOADS LESS OR EQUAL THAN +62.0, -75.0 p.s.f. AND Max. SHUTTER SPAN AS PER SCHEDULES ON SHEET 9 OF 9.
2. NEW 2" x 6" P. T. TO BE SOUTHERN PINE No. 2, SURFACED DRY WITH 19 % M. M. C. W/ SPECIFIC DENSITY OF 0.55.
3. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

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By *Helmut A. Miller*
Miami Dade Permit Control
Division

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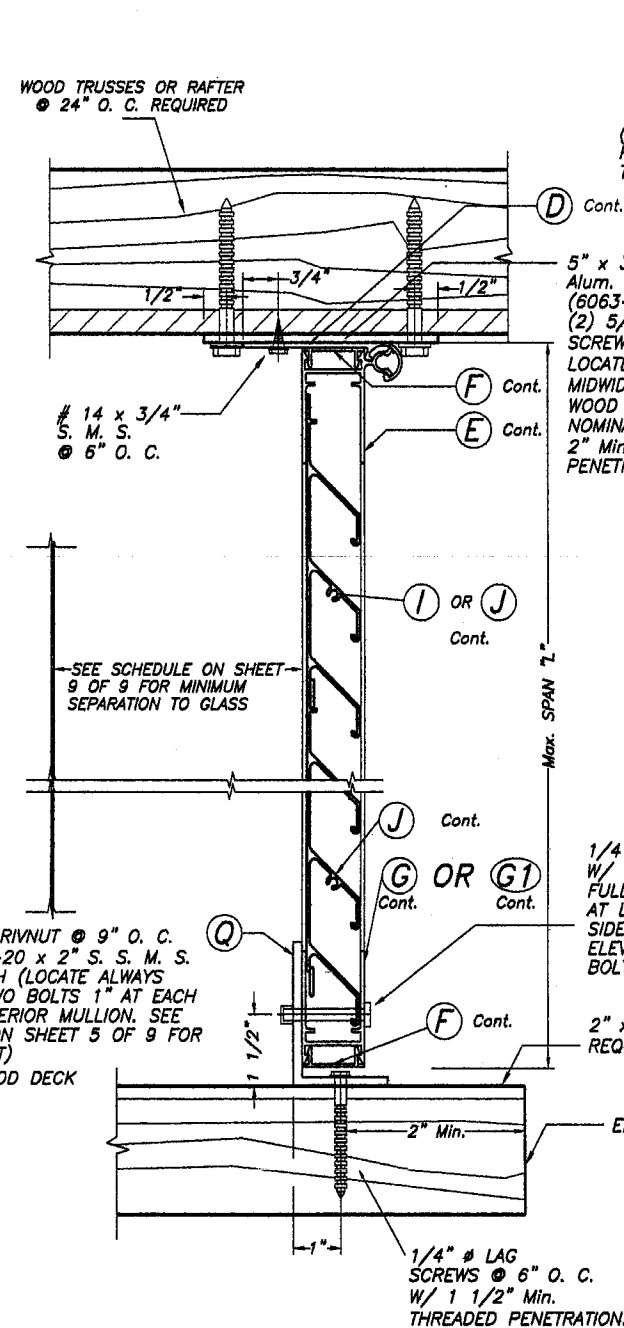
TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 38th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166
Phone : (305)871-1530 Fax : (305)871-1531
EB-0006719
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450 WEST McNAB ROAD FORT LAUDERDALE, FL. 33309				06-250 DRAWING No	
PHONE (954) 247-3330 FAX (954) 247-3492				SHEET 7 OF 9	
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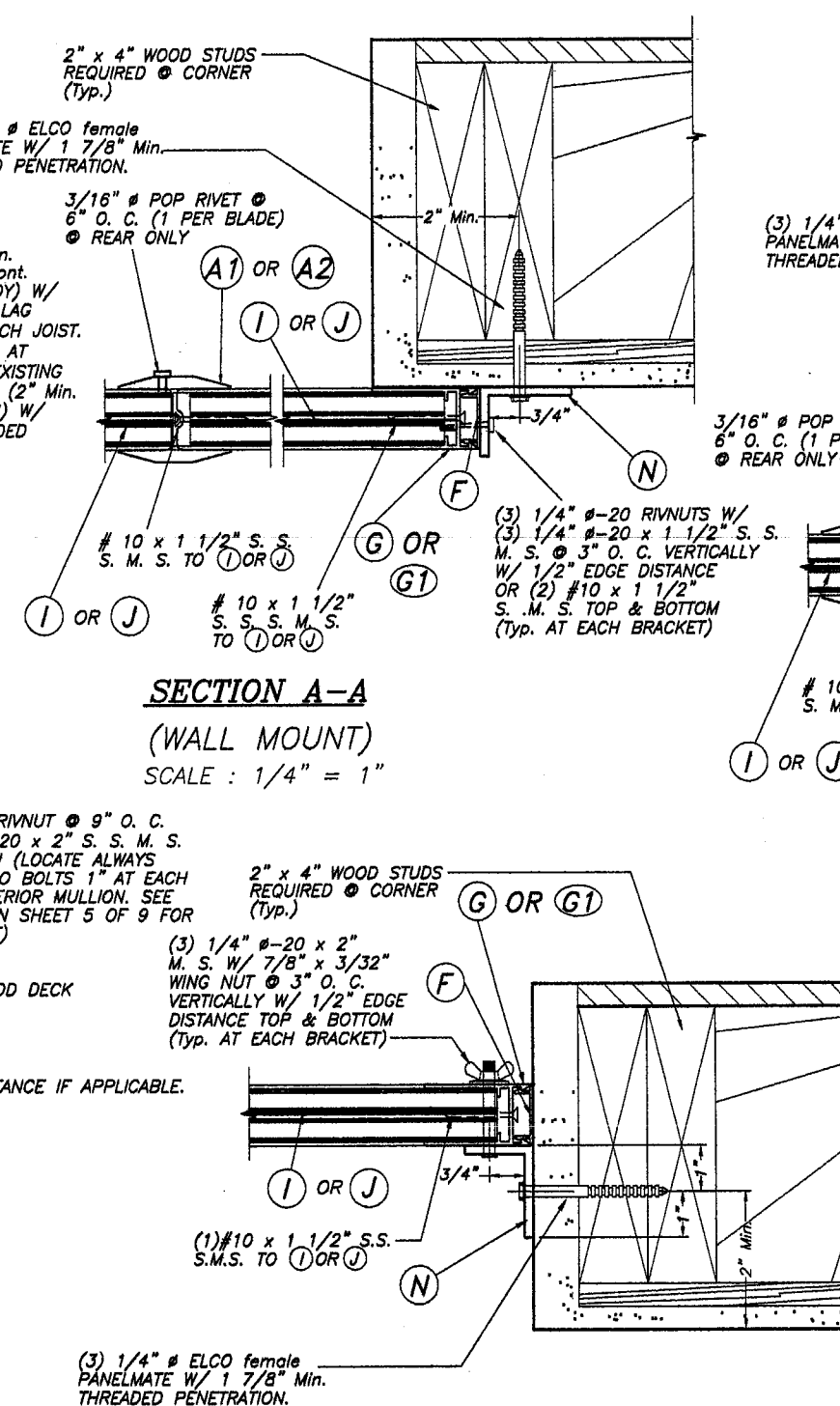
ALTERNATIVE 4A

FLOOR/CEILING MOUNTING INSTALLATION
- SECTION A SCALE: 1/4" = 1"



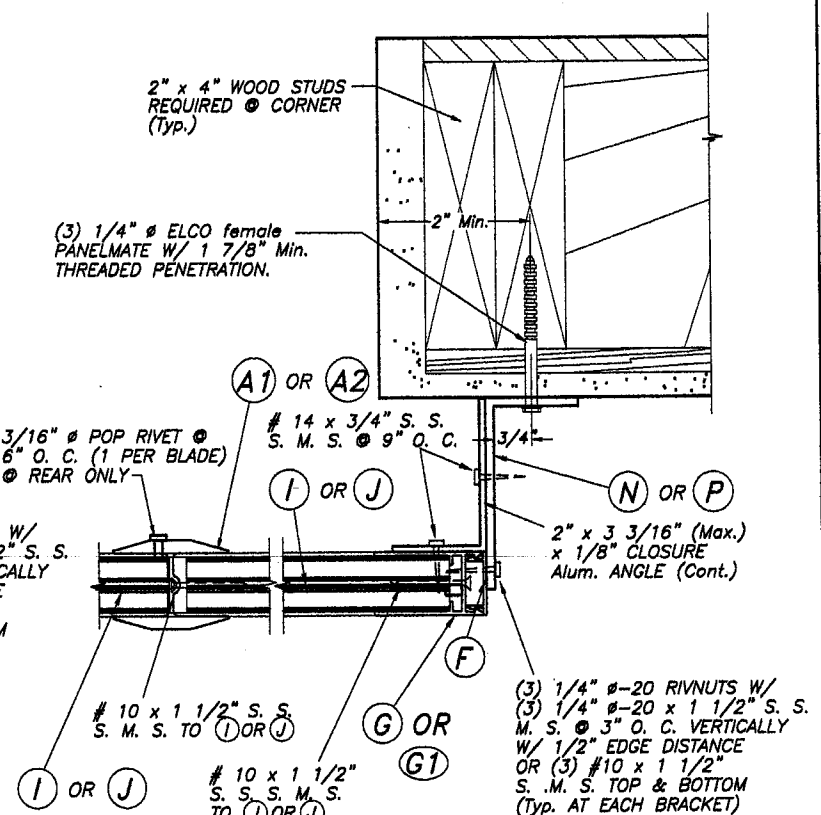
ALTERNATIVE 4B

INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS



SECTION A-A
(WALL MOUNT)
 SCALE: 1/4" = 1"

SECTION G-G
(FLOOR/CEILING MOUNT)
 SCALE: 1/4" = 1"



SECTION B-B
(WALL MOUNT)
 SCALE: 1/4" = 1"

NOTES :

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06-23-2009

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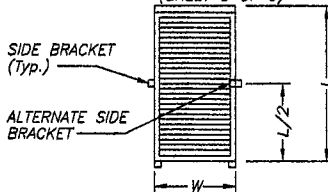
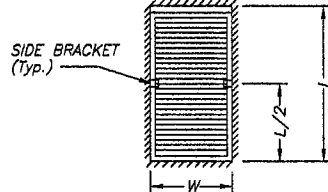
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ALL BROWARD HURRICANE PANEL, INC.
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 FORT LAUDERDALE, FL. 33309
 PHONE (954) 247-3330 FAX (954) 247-3492

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 SHEET 8 OF 9

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 Miami Trade Control
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MAXIMUM SINGLE UNIT FOR A CORRESPONDING DESIGN PRESSURE AND MOUNTING TYPE

BAHAMA SHUTTER TYPE	SINGLE UNIT ELEVATION			
	CASE I : WALL + WALL MOUNT OR TRAPPED AT SIDES (SHEET 3 OF 9)	CASE II : TRAPPED TOP/BOTTOM + SIDES (SHEET 6 OF 9)		
				
DESIGN PRESSURE RATING (p.s.f.) AND CASE #	MAXIMUM UNIT WIDTH "W" (IN)	MAXIMUM SPAN "L" (IN)		
		W/O SIDE BRACKET	W/ SIDE BRACKET	MINIMUM SEPARATION TO GLASS (IN)
CASES I & II +56.0 , -63.0	42"	52"	N/A	3 1/8"
CASES I & II +75.0 , -100.0	42"	N/A	96"	2 1/8"

SCHEDULE # 2

LIMITATIONS FOR SINGLE AND MULTIPLE UNITS BAHAMA SHUTTER'S UNIT WIDTH (IN), SPAN L (IN) AND CORRESPONDING MAXIMUM DESIGN PRESSURE (p.s.f.) FOR THE INSTALLATION OF SIDE & SILL BRACKETS INTO CONCRETE & MASONRY BUILDINGS BY MEANS OF (3) 1/4" ϕ x 7/8" CALK-IN ANCHORS *

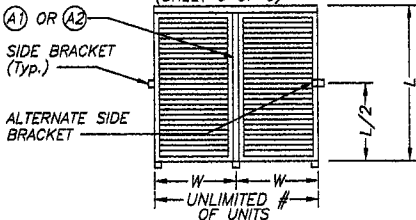
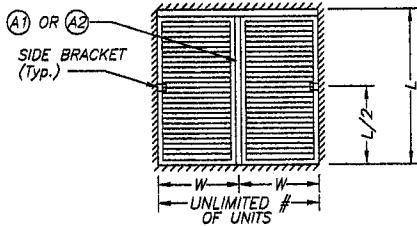
MAXIMUM NEGATIVE DESIGN PRESSURE RATING (p.s.f.)	SINGLE UNITS				MULTIPLE UNITS			
	SIDE & SILL BRACKETS **				SIDE & SILL BRACKETS **			
	TO CONCRETE		TO BLOCK		TO CONCRETE		TO BLOCK	
	Max. "W"	Max. "L"	Max. "W"	Max. "L"	Max. "W"	Max. "L"	Max. "W"	Max. "L"
-55.7	42"	96"	42"	96"	36 1/2"	84"	36"	84"
-65.0	42"	96"	42"	96"	36 1/2"	84"	36"	72"
							31"	84"
-75.0	42"	96"	42"	96"	36 1/2"	83"	36 1/2"	62"
							27"	83"
-83.0	42"	96"	42"	96"	N/A	N/A	N/A	N/A
-100.0	42"	96"	42"	63	N/A	N/A	N/A	N/A
			36"	73				

* FOR ELCO PANELMATES ((3) 1/4" Ø W/ 1 7/8" PENETRATION) USED AT SILL & SIDE BRACKETS FOR INSTALLATIONS INTO WOOD. SEE SCHEDULES # 1 & # 1A FOR SHUTTER SIZE.

** IN ANY CASE, MAXIMUM "W" & "L" VALUES W/ CORRESPONDING DESIGN LOADS SHALL NOT EXCEED MAXIMUM VALUES INDICATED ON SCHEDULES # 1 & 1A.

SCHEDULE # 1A

MAXIMUM MULTIPLE UNIT FOR A CORRESPONDING DESIGN PRESSURE AND MOUNTING TYPE

BAHAMA SHUTTER TYPE	CASE I : WALL + WALL MOUNT OR TRAPPED AT SIDES (SHEET 3 OF 9)		MULTIPLE UNIT ELEVATION		CASE II : TRAPPED TOP/BOTTOM + SIDES (SHEET 6 OF 9)	
						
DESIGN PRESSURE RATING (p.s.f.) AND CASE #	MAXIMUM UNIT WIDTH "W" (IN)	MAXIMUM SPAN "L" (IN)				
		W/O SIDE BRACKET	W/ SIDE BRACKET	INTERIOR MULLION TYPE REQUIRED	MINIMUM SEPARATION TO GLASS (IN)	
CASE I +50.0 , -43.3	36 1/2"	72 1/2"	N/A	A1	2 1/2"	
CASE I +62.0 , -75.0	36 1/2"	N/A	83"	A2	2 3/8"	
CASE II +62.0 , -75.0	36 1/2"	N/A	84"	A2	2 3/8"	

SCHEDULE # 3


MAXIMUM ANCHOR SPACING AT TOP FEMALE HINGES (B), (C), OR (D) AS WELL AS SILL ANGLE (Q) AT BOTTOM (AS APPLICABLE) FOR INSTALLATIONS INTO POURED CONCRETE HEADERS AND SILL ***

DESIGN PRESSURE RATING (p. s. f.)	SINGLE & MULTIPLE UNITS
	TOP & BOTTOM TO CONCRETE
ALL PRESSURES COVERED IN SCHEDULE # 1 & # 1A	9" O.C. TOP & 7" O.C. BOTTOM.

*** SEE SHEETS 7 & 8 OF 9 FOR ANCHOR SPACING FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS.

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Miami-Dade Product Control
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 <p>TILTECO INC.</p> <p>TILLIT TESTING & ENGINEERING COMPANY</p> <p>6385 N.W. 38th. St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33168</p> <p>Phone : (305)871-1530 . Fax : (305)871-1531</p> <p>EB-0006719</p> <p>WALTER A. TILLIT Jr., P. E.</p> <p>FLORIDA Lic. # 44167</p> <p>© 2004 TILTECO INC.</p>	<p>ASSA / EXTRUDED BERTHA BAHAMA SHUTTER</p> <p>SOUTHERN METAL PRODUCTS, LLC d/b/a</p> <p>ALL BROWARD HURRICANE PANEL, INC.</p> <p>450 WEST McNAB ROAD</p> <p>FORT LAUDERDALE, FL. 33309</p> <p>PHONE (954) 247-3330 FAX (954) 247-3492</p>	<p>DRAWN BY:</p> <p>F.P.</p> <p>10/24/06</p> <p>DATE</p> <p>06-250</p> <p>DRAWING No</p>

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SHEET 9 OF 9